dicarboxylic acids, wherein one of the at least two dicarboxylic acids is dimer fatty acid corresponding to a weight ratio from 5 wt-% to 45 wt-% of dimer fatty acid and 55 wt-% to 95 wt-% of at least one additional dicarboxylic acid and optionally

(a3) at least one hydroxycarboxylic acid component,

the sum of the percentages by weight of components (a) to (c), of components (a1) and of components (a2) being 100% in each case.

Please CANCEL Claim 5.

REMARKS

Applicants respectfully request reconsideration of the Office position set forth in the outstanding Office Action mailed December 23, 2002, in light of the foregoing amendments and the following remarks.

Status of the Application

Claims 1-10 are pending in the above-referenced patent application. Per the Official Action dated December 23, 2002, claims 8-10 have been withdrawn from further consideration by the Examiner, claims 1-4, 6, 7 stand as rejected under 35 U.S.C. §102(b) and 35 U.S.C. §102(e), or alternatively, under 35 U.S.C. §103(a), and claims 2 and 5 and the Declaration stand as objected to by the Examiner. Support for amended claim 1 is found on page 4, lines 10-11. Support for newly added claim 11 is found in claim 1 and claim 5.

Attached hereto is a marked-up version of the changes made to the claim by the current amendment. The attached page is captioned "**Version with markings to show changes made**".

Restriction Requirement

Previously, a Restriction Requirement was issued, wherein Applicant made a provisional election to prosecute the invention of Group I, claims 1-7 drawn to a coating agent comprising non-aromatic polyester polyol, crosslinking agent and optional hydroxy functional binders and/or hydroxyl functional reactive thinners, classified in class 525, subclass 440. Applicants hereby affirm this election.

Objections To The Claims

Claims 2 and 5 have been objected to by the Examiner. Claim 2 is objected to as being of improper dependent form for failing to further limit the subject matter of a previous claim. The Examiner further asserts that Claim 2 is broader than claim 1 in that claim 1 requires component (a3) at least one hydroxycarboxylic acid, while claim 2 encompasses 0 wt-% of component (a3). Claim 5 is objected to as being dependent upon a rejected base claim, but the Examiner has also indicated, as shown below, that this claim would be allowable if rewritten in independent form.

With respect to claim 2, Applicants respond that claim 2 is not broader than claim 1 because the language of claim 1 explicitly states that component (a3) is an optional component of the at least one cross-linking agent, and therefore, the presence of component (a3) is not a requirement of claim 1. Furthermore, claim 1 names those components capable of comprising the polyester polyol (a), however these components are not limited as to the percentage of each that is utilized in the polyester polyol. The percentages provided in claim 1 for (a1), (a2) and (a3) only describe the amounts of those ingredients comprising (a1), (a2) and (a3). Claim 2 limits the scope of claim 1 by assigning percentages to components (a1), (a2) and (a3) to describe the make-up of the polyester polyol, such that where component (a3) is optionally not utilized in, it would then be 0%. Thus, claim 2 properly depends from claim 1, and therefore, the Applicant respectfully requests that the objection be withdrawn.

With respect to claim 5, Applicants have combined claims 1 and 5 and rewritten as claim 11, as per the recommendation of the Examiner and claim 5 has been canceled. Thus, Applicants respectfully request that the objection to claim 5 be withdrawn.

Oath or Declaration

The Examiner asserts that the oath or declaration is defective because the specification to which it is directed has not been adequately identified because the serial number is missing, and thus, a new oath or declaration is required.

Applicants respond that a Substitute Declaration in accordance with 37 CFR §1.67(a) and identifying the specification to which it is directed is submitted herewith.

Rejections Under 35 U.S.C. §102/103

Claims 1-4, 6 and 7 stand as rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over WO '131. The Examiner asserts that the reference teaches coating compositions comprising a low molecular weight non-aromatic polyester polyol having up to ten hydroxyl groups and a crosslinking agent. The Examiner further asserts that the polyester polyols are prepared from aliphatic polyol, dicarboxylic acid and epoxy compound (page 3, line 37 through page 5, line 29) and that the non-aromatic low molecular weight polyester polyols having hydroxyl functionality inherently have high hydroxyl values or it would have been obvious to prepare non-aromatic low molecular weight polyester polyols having high hydroxyl functionality that would be expected to have high hydroxyl values.

Applicants respectfully respond, however, that WO'131 fails to teach or suggest the present invention. WO'131 teaches reactive oligomers which are produced by first reacting a multifunctional alcohol with alicyclic monomeric anhydrides (see page 5, lines 3 to 5). The reaction product of this first reaction is described as an oligomeric acid (see page 5, line 13), which is then reacted with a monofuntional epoxy. As a result, the polyhydroxy functional oligomers of WO'131 have a highly systematic structure, which is evidenced on page 4, line 36 through page 5, line 2. In fact, WO'131 teaches away from the present invention when it states "[t]he foregoing two-step process ensures that the hydroxyl functionalities are uniformly distributed on each oligomeric chain of the reactive oligomer ...". (See page 5, lines 21-24; see also page 4, line 36 through page 5, line 2). WO'131 directly attributes the high degree of reactivity of its reactive oligomers to its uniform structure, thus teaching away from a more random structure. A uniform structure is in direct contrast to the structure of the present invention where the polyester polyol (a) is very branched and composed randomly of components (a1) to (a3). This random placement of components is neither taught nor suggested by WO'131. The random placement of components (a1) to (a3) is necessary for good compatibility with other hydroxyl-functional binders (b), solvents and cross-linking agents (c). Thus, WO'131 does not provide any motivation, teaching or suggestion to one skilled in the art that would lead to the present invention.

In addition, the polyhydroxy functional oligomers described by WO'131 are derived from the ring-opening reaction of the terminal carboxy groups of the oligomeric acid with the monofunctional epoxy. The reaction of the carboxyl groups with epoxy compounds is necessary in order to get the crosslinkable binder equipped with additional hydroxyl groups, otherwise the compound would lack the required amount of hydroxyl groups needed for crosslinking. In other words, the hydroxyl number would be lower than intended for the crosslinking system because it would it only be derived from the hydroxyl groups present prior to reacting the carboxyl groups with the epoxy. Thus, the oligomers have an epoxy compound as a substituent. This is in direct contrast to the present invention, where polyester polyol (a) consists of only components (a1), (a2) and optionally (a3). The present invention does not utilize an epoxy compound as a substituent as is required by WO'131. Thus, since WO'131 does not teach, suggest or provide any motivation to utilize a epoxy-free compound, it would not guide one skilled in the art to the present invention.

Therefore, the subject matter disclosed by WO'131 does not anticipate, or otherwise render as obvious, the Applicants' claimed invention, and Applicants respectfully request that the rejection be withdrawn.

Claims 1-4, 6 and 7 stand as rejected under 35 U.S.C. §102(e) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Ramesh. The Examiner asserts that the reference teaches coating compositions comprising a low molecular weight non-aromatic polyester polyol having six hydroxyl groups and a crosslinking agent. The Examiner further asserts that polyester polyols are prepared from aliphatic polyol having three hydroxyl groups, dicarboxylic acid, hydrocarboxylic acid and epoxy compound (examples 1 and 3 and paint examples 1 and 2) and that the non-aromatic low molecular weight polyester polyols having hydroxyl functionality inherently have high hydroxyl values or it would have been obvious to prepare non-aromatic low molecular weight polyester polyols having high hydroxyl functionality that would be expected to have high hydroxyl values.

Applicants respond that Ramesh teaches a hyperbranched polyester polyol macromolecule having a plurality of both embedded and exterior hydroxyl groups with a branched hydrocarbon chain for flexibility thereon (see Paragraph 0011). These hyperbranched polyester polyols described by Ramesh have a specific

systematic structure, resulting from the fact that they are synthesized according to the following required particular sequence (optional step set forth in paragraph 0040):

1.) a first step of reacting a started polyol with a chain extender, which contains a plurality of hydroxyl groups and also contains a carboxyl group, to form a first generation branched core (see paragraphs 0019 and 0036);

2.) a second step of forming the hyperbranched molecule hereof involves reacting the branched core with an intermediate substituent which includes a polyfunctional carboxylic anhydride or acid thereof, to form an intermediate polyester macromolecule having reactive carboxyl groups thereon (see paragraphs 0021 and 0041);

3.) a third step of forming the hyperbranched polyol macromolecule hereof involves reacting the intermediate polyester macromolecule with a second chain extender to form a hyperbranched polyol macromolecule having both primary and secondary hydroxyl groups thereon (see paragraphs 0022 and 0042), wherein the second chain extender is a flexible hydrocarbon compound having a terminal or non-terminal epoxide group thereon (see paragraph 0043).

As set forth above, the compounds disclosed by Ramesh are required to contain an epoxide group (see step 3), and Ramesh does not teach or suggest or provide any motivation or incentive to form an epoxy-free compound. In Ramesh, the reaction of the carboxyl groups with epoxy compounds is necessary in order to get the crosslinkable binder equipped with additional hydroxyl groups, otherwise the compound would lack the required amount of hydroxyl groups needed for crosslinking. In other words, the hydroxyl number would be lower than intended for the crosslinking system because it would it only be derived from the hydroxyl groups present prior to reacting the carboxyl groups with the epoxy. On the contrary, polyester polyol (a) of the present invention consists of only components (a1), (a2) and optionally (a3) as shown in amended claim 1. The present invention does not utilize an epoxy compound as a substituent, and thus, Ramesh does not provide any motivation, teaching or suggestion to one skilled in the art that would lead to the present invention.

In addition, Ramesh discloses compounds having a systematic or regular structure evidenced by the specific reaction sequence set forth above. This is in direct contrast to the present invention where the polyester polyol (a) is very branched and composed randomly of components (a1) to (a3). This random placement of components is neither taught nor suggested by Ramesh. The random placement of components (a1) to (a3) is necessary for good compatibility with other hydroxyl-functional binders (b), solvents and cross-linking agents (c). Thus, Ramesh does not provide any motivation, teaching or suggestion to one skilled in the art that would lead to the present invention.

In sum, the subject matter disclosed by Ramesh does not anticipate, or otherwise render as obvious, Applicants' claimed invention. Therefore, Applicants respectfully request that the rejection be withdrawn.

Allowable Subject Matter

The Examiner has indicated claim 5 would be allowable if these claims were rewritten in independent form including all of the limitations of the base claim and any intervening claims.

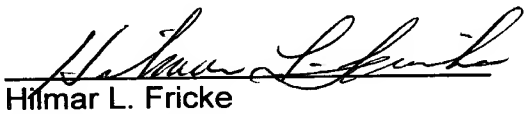
Applicants respond that the subject matter of claims 1 and 5 have been combined and rewritten as newly added claim 11.

Summary

In view of the foregoing remarks, Applicants submit that the Examiner's rejections under §102(b or e) and §103(a) have been properly traversed, accommodated, or rendered moot, and a full and complete response has been made to the outstanding Office Action dated December 23, 2002. A Notice of Allowance is respectfully solicited. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

There should be no fee due in connection with the filing of this Response. However, should a fee be due which is not accounted for, please charge such fee to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Respectfully submitted,



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Date: April 17, 2003

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In showing the changes, the material to be deleted is in brackets and the material to be inserted is underlined.

IN THE CLAIMS:

Please AMEND claim 1 as follows:

Claim 1. Coating agents with resin solids comprising

(a) 10 wt-% to 80 wt-% of a non-aromatic polyester polyol,

(b) 0 wt-% to 70 wt-% of at least one constituent selected from the group consisting of hydroxyl-functional binders that are different from polyester polyol (a), hydroxyl-functional reactive thinners and combinations thereof, and

(c) 20 wt-% to 60 wt-% of at least one cross-linking agent for the hydroxyl-functional components (a) and (b),

wherein the polyester polyol (a) is a branched structure [has] having a calculated molecular mass from 600 to 1400, an acid value from 0 to 30 mg KOH/g and [an] a hydroxyl value from 250 to 600 mg KOH/g with a calculated hydroxyl functionality from 4.5 to 10, and is composed of randomly positioned components [which comprise] consisting of

(a1) hydroxyl components comprising 0 wt-% to 20 wt-% of at least one diol and 80 wt-% to 100 wt-% of at least one polyol having 3 to 6 hydroxyl groups,

(a2) carboxyl components comprising 0 wt-% to 20 wt-% of at least one monocarboxylic acid and 80 wt-% to 100 wt-% of at least one dicarboxylic acid, and optionally

(a3) at least one hydroxycarboxylic acid component,

the sum of the percentages by weight of components (a) to (c), of components (a1) and of components (a2) being 100% in each case.